

Find maximas and minimas

$$f(x) = \frac{x^3}{4} - 3x$$

$$f'(x) = \frac{3x^2}{4} - 3 = 0 \quad (1)$$

$$x = 2 \text{ or } -2$$



Intervals	$(-\infty, -2)$	$(-2, 2)$	$(2, \infty)$
Test Value	-3	0	3
sign of $f'(x)$	+	-	+
Conclusion	increase	decrease	increase
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relative max =	4	at $x = -2$	
relative min =	-4	at $x = 2$	

